Table 2

Wafer	*Active region*	*fd*	*Doping (cm ^{3})*	*Dimensions (jinr)*
Al	resonant phonon	0.32	6.83 **x** 10^{15}	1500 **x** 150
A2	resonant phonon	0.43	6.83 **x** 10^{15}	1500 **x**150
*B*1	B-to-C + phonon extraction	0.36	5.61 **x** 10^{15}	3000 **x**150
B2	B-to-C + phonon extraction	0.36	1.90 **x** 10^{16}	1500 **x**150

Table 2. Key parameters of the wafers characterized experimentally. Wafers A1 and A2 are based on a three-well resonant phonon active region [14] with different scaled oscillator strengths fU/). Wafers B1 and B2 are based on an active region with interlaced bound-to-continuum (B-to-C) and a phonon extraction stages [36] with different doping concentrations and device lengths. Two nominally identical laser ridges were fabricated from each wafer, one is with a Ag-based surface-plasmon (SP) waveguide and the other with a Au-based SP waveguide, giving eight lasers in total in this study.